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EXAMINER

BLACK, LINH

ART UNIT PAPER NUMBER

2167

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/991,485

Applicant(s)

COOKE ET AL.

Examiner

LINH BLACK

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-20 and 28-30 is/are allowed.
- 6) ☒ Claim(s) 1-12 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This communication is in response to the Applicants' Response dated 4/7/05. Claims 1-7, 9-30 are pending in the application. Claims 1, 7, 11, 13, 21, and 28 are independent claims.

Claim Objections

Claim 1 is objected to because of the following informalities: the status of the claim is shown as "currently amended" but no amendment to the claim's limitations has been shown. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-10, 21-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Bauer et al. (USP 5926816).

Bauer et al. anticipated the independent claim 1 by the following:

Art Unit: 2167

a local replicated database – fig. 1, items 20a-z are local replicated databases with respective client-side database synchronizers, items 27a-z; col. 6, lines 15-23.

an interface for communicating with one or more remote replicated database via a communications link – col. 6, lines 60-66 (An interface has to be existed before clients/users can insert/update/delete/communicate with the remote database).

a synchronization manager associated with the local replicated database for sending changes made on the local replicated database to one or more remote replicated databases for reconstruction/resolve by the one or more remote replicated databases – col. 1, line 58 to col. 2, line 67 (wherein “the database synchronizer is a general purpose system which accommodates heterogeneous computers and databases...While a central (server) database includes information from all the clients, each remote (client) database is generally limited to data related to the respective client).

receiving changes made on a remote replicated database, and reconstructing changes received from a remote replicated database on the local replicated database – col. 2, lines 58-67; col. 4, line 13-55.

As per claim 2, Bauer et al. teach wherein the synchronization manager is configured for sending changes, receiving changes, and reconstructing changes independently from one another – col. 7, lines 62-67; col. 11, lines 29-67.

As per claims 3 and 9, Bauer et al. teach a sequence table associated with

Art Unit: 2167

the local replicated database for tracking changes sent to and received from remote replicated databases - fig. 1, items 20a-z are local replicated databases with respective client-side database synchronizers, items 27a-z; col. 3, lines 12-25; col. 6, lines 15-23; col. 8, lines 3-26.

As per claims 4 and 10, Bauer et al. teach wherein the synchronization manager is configured for sending changes to one or more remote replicated databases in one or more change files – col. 9, lines 25-45.

wherein each change file comprises a local sequence number identifying the **local remote database** and a remote sequence number identifying each remote database to which the change file was sent, the local and remote sequence numbers being stored in the sequence table – fig. 1, col. 5, lines 5-15; col. 11, lines 17-62; col. 13, line 62 to col. 14, line 4.

As per claim 5, Bauer et al. teach wherein the synchronization manager is configured for receiving changes from one or more remote replica databases in one or more change files – col. 11, lines 49-62.

wherein each change file comprises a local sequence number identifying the local remote database, and a remote sequence number identifying the remote database from which each change file was sent, the local and remote sequence numbers being stored in the sequence table - col. 13, line 62 to col. 14, line 4.

Art Unit: 2167

As per claim 6, Bauer et al. teach wherein the synchronization manager is configured for monitoring activity of the local replicated database, and for reconstructing changes in a manner that substantially minimizes interference with operation of the local replicated database – col. 2, lines 5-21 and lines 47-67.

Claim 7 is rejected based on the same ground as of claim 1 in which the remote replicated database is equivalent to a second replicated database as of claim 7. Bauer et al. teach in fig. 1, items 20a-z are local replicated databases with respective client-side database synchronizers, items 27a-z; col. 6, lines 15-23; wherein the first and second synchronization managers are configured for reconstructing changes autonomously from one another – col. 6, lines 39-50.

Claim 11 is rejected based on the same ground as of claim 1 in which “recent local changes” in claim 11 is equivalent to “changes” in claim 1 because Applicants teach that the replicated databases are at least intermittently communicating with one another – specification, page 5, line 7. However, Bauer et al. teach client nodes are intermittently communicate with the server node – col. 6, lines 41-47. Bauer et al. also teach sending recent local changes made on the local database to a remote database for reconstruction by the remote database - fig. 1, items 20a-z are local replicated databases with respective client-side database synchronizers, items 27a-z; col. 6, lines 15-23; col. 1, line 58 to col. 2, line 67; col. 4, line 13-55.

Art Unit: 2167

As per claim 12, Bauer et al. teach wherein the local and remote databases are version-managed databases, each having a plurality of versions, and wherein one version in the local database is nominated as an interface version, and wherein the reconstructing step is performed using the interface version – col. 3, lines 30-50 (in which the client maintains two versions of a table to be synchronized. One version is actively modified by the client and contains the current values of the data fields. The other version is a before-image of the replica database created at refresh); col. 4, line 26-38; col. 8, lines 3-39.

Claim 21 is rejected based on the same ground as of claim 1. However, Applicants further teach the method of synchronizing is autonomous and asynchronous. However, Bauer et al. teach the first and second synchronization managers are configured for reconstructing changes autonomously from one another – col. 1, lines 13-19; col. 7, line 62 to col. 8, line 39. Bauer et al. further teach asynchronous synchronization – col. 2, lines 5-67. Bauer et al. teach in fig. 1, items 20a-z are local replicated databases with respective client-side database synchronizers, items 27a-z; col. 6, lines 15-23; wherein the first and second synchronization managers are configured for reconstructing changes autonomously from one another – col. 6, lines 39-50.

As per claim 22, Bauer et al. teach wherein each of the local and remote databases is a version-managed database comprising a plurality of versions, and wherein a version in each of the local and remote databases is nominated as a local interface version and

a remote interface version, respectively – col. 3, lines 30-49 (in which the client maintains two versions of a table to be synchronized. One version is actively modified by the client and contains the current values of the data fields. The other version is a before-image of the replica database created at refresh); col. 4, line 26-38; col. 8, lines 3-39.

As per claim 23, wherein each of the local and remote databases comprises a plurality of states and a sequence table comprising sequence numbers for identifying respective states – col. 3, lines 12-25; col. 6, lines 15-23; col. 8, lines 3-60. (States are defined in the specification, page 2, lines 14-21)

As per claims 24 and 25, wherein the states are explicit; wherein the states are implicit – col. 3, lines 31-49; col. 8, lines 3-39; col. 22, lines 29-37.

As per claim 26, wherein changes sent between the local and remote databases are sent in change files – col. 2, lines 40-46; col. 3, lines 31-49; col. 9, lines 25-45.

As per claim 27, wherein each change file sent by the local database comprises a local sequence number identifying a state of the local database at the time the change file is sent and a remote sequence number identifying a state of the remote database known by the local database – col. 9, lines 25-45; col. 13, line 62 to col. 14, line 4.

Art Unit: 2167

and wherein each change file sent by the remote database comprises a remote sequence number identifying a state of the remote database at the time the change file is sent and a local sequence number identifying a state of the local database known by the remote database at the time the change file is sent – col. 3, lines 11-24; col. 8, lines 20-39.

Allowable Subject Matter

Claims 13-20 and 28-30 are allowed. The combinations of limitations in claims 13 and 28, especially steps (a) to (f)/(g) are not found in the art of record.

Response to Arguments

Applicant's arguments filed 4/7/05 have been fully considered but they are not persuasive. Please see claims' cited columns and lines above for correspondent teachings in prior art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 571-272-4106. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LINH BLACK

Application/Control Number: 09/991,485

Page 10

Art Unit: 2167

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Examiner
Art Unit 2167

June 22, 2005

Duke S. Wasserman
Primary Examiner